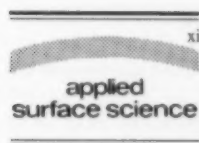




ELSEVIER

## Contents



Preface	vii
Conference organization	ix
Sponsors	x
 I. MECHANISMS AND MODELLING OF LASER ABLATION	
Microscopic and mesoscopic aspects of laser-induced desorption and ablation R.F. Haglund, Jr.	1
Modeling of dynamical processes in laser ablation J.N. Leboeuf, K.R. Chen, J.M. Donato, D.B. Geohegan, C.L. Liu, A.A. Puretzky and R.F. Wood	14
An analytical model for three-dimensional laser plume expansion into vacuum in hydrodynamic regime S.I. Anisimov, B.S. Luk'yanchuk and A. Luches	24
Hydrodynamic phenomena during laser irradiation: a finite difference approach N. Seifert, G. Betz and W. Husinsky	33
Material removal and plasmadynamics during pulsed laser deposition by excimer and CO <sub>2</sub> laser radiation M. Aden and E.W. Kreutz	39
Laser-solid interaction and dynamics of laser-ablated materials K.R. Chen, J.N. Leboeuf, R.F. Wood, D.B. Geohegan, J.M. Donato, C.L. Liu and A.A. Puretzky	45
Analytical description of the film thickness distribution obtained by the pulsed laser ablation of a monoatomic target: application to silicon and germanium F. Antoni, C. Fuchs and E. Fogarassy	50
An analytical model for the laser ablation of materials A.D. Boardman, B. Cresswell and J. Anderson	55
Calculations and experiments of material removal and kinetic energy during pulsed laser ablation of metals S. Föhler and H.-U. Krebs	61
Measurement and calculation of the Fe <sub>2</sub> O <sub>3</sub> ablation depth A. Lifsi, M. Guyot, R. Krishnan and V. Cagan	66
Calculation and measurement of the ultrasonic signals generated by ablating material with a Q-switched pulse laser A. Hoffmann and W. Arnold	71
2D modeling of laser-induced plume expansion near the plasma ignition threshold H.C. Le, J. Vuillon, D. Zeitoun, W. Marine, M. Sentis and R.W. Dreyfus	76
The influence of the electron structure of atoms shells on characteristics of optical breakdown in metal vapour V.I. Mazhukin, I.V. Gusev, I. Smurov and G. Flamant	82
2D-simulation of the system: laser beam + laser plasma + target V.I. Mazhukin, I. Smurov and G. Flamant	89
 II. ANALYSIS AND SPECTROSCOPY OF THE LASER ABLATED MATERIAL	
Modeling of laser induced plasma, spectroscopic and time of flight experiments in pulsed laser deposition G. Granse, S. Völlmar, A. Lenk, A. Rupp and K. Rohr	97

Spatial distribution of laser-ablated material by probing a plasma plume in three dimensions A. Mele, A. Giardini Guidoni, R. Kelly, A. Miotello, S. Orlando and R. Teghil	102
Electrostatic probe and optical spectroscopy studies of low temperature laser produced plasmas J.M. Hendron, R.A. Al-Wazzan, C. Mahony, T. Morrow and W.G. Graham	112
Study of the expansion of the laser ablation plume above a boron nitride target B. Angleraud, C. Girault, C. Champeaux, F. Garrelie, C. Germain and A. Catherinot	117
Plasma parameters in pulsed laser-plasma deposition of thin films S. Metev, M. Ozegowski, G. Sepold and S. Burmester	122
Preferential vaporization and plasma shielding during nano-second laser ablation X. Mao, W.-T. Chan, M. Caetano, M.A. Shannon and R.E. Russo	126
Laser ablation plume thermalization dynamics in background gases: combined imaging, optical absorption and emission spectroscopy, and ion probe measurements D.B. Geohegan and A.A. Puzosky	131
Electromagnetic diagnostics during pulsed laser deposition A.V. Kabashin, W. Marine, P.I. Nikitin and M. Sentis	139
Fundamental characteristics of laser-material interactions (ablation) in noble gases at atmospheric pressure using inductively coupled plasma-atomic emission spectroscopy R.E. Russo, X.L. Mao, M. Caetano and M.A. Shannon	144
Monitoring stress power during high-power pulsed laser-material interactions M.A. Shannon and R.E. Russo	149
Simultaneous monitoring of ablative shocks in air by high-speed cineholography and multiple-pass beam deflection probe J. Diaci, D. Hurley, J.W. Wagner and J. Mořina	154
Transport of neutral atoms, monoxides and clusters in the plume produced by laser ablation of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ in oxygen environment A.V. Bulgakov, M.R. Predtechensky and A.P. Mayorov	159
Temperature measurements during laser ablation of Si into He, Ar and $\text{O}_2$ H.C. Le, R.W. Dreyfus, W. Marine, M. Sentis and I.A. Movtchan	164
Spatially and temporally resolved emission intensities and number densities in low temperature laser-induced plasmas in vacuum and in ambient gases R.A. Al-Wazzan, J.M. Hendron and T. Morrow	170
Laser produced plasmas in high fluence ablation of metallic surfaces probed by time-of-flight mass spectrometry S. Amoruso, A. Amodeo, V. Berardi, R. Bruzzese, N. Spinelli and R. Velotta	175
Optical diagnostics of the laser-target and laser-plume interaction in pulsed laser ablation F. Fuso, L.N. Vyacheslavov, G. Lorenzi, M. Allegrini and E. Arimondo	181
Time-of-flight characterization of laser ablation plume from $\text{NbTe}_2$ target in He atmosphere F. Grangeon, H. Sassoli, W. Marine and M. Autric	186
Investigation of vaporization and condensation processes of thin layers of $\text{CdHgTe}$ from laser erosion plasma in Hg atmosphere B.K. Kotlyarchuk, D.I. Popovych, V.K. Savchuk and V.G. Savitsky	192
Density and electron temperature of laser induced plasma - a comparison of different investigation methods A. Lenk, Th. Witke and G. Granse	195
Laser plasma threshold of metals S. Petzoldt, J. Reif and E. Matthias	199
Comments on explosive mechanisms of laser sputtering R. Kelly and A. Miotello	205
Analysis of the expansion of hydroxyapatite laser ablation plumes P. Serra, L. Cl�ries and J.L. Morena	216
Optical and particle properties of PLD vapour/plasmas of ceramics M. Alunovic, H. Stamm, M. Aden and E.W. Kreutz	222

Energy-dispersive mass spectrometry of high energy ions generated during KrF excimer and frequency-doubled Nd:YAG laser ablation of metals	
G.C. Tyrrell, L.G. Coccia, T.H. York and I.W. Boyd	227
Spectroscopic study of the microwave plasma enhanced pulsed laser deposition for $Y_1Ba_2Cu_3O_{7-x}$ superconducting thin films	
B.C. Chung, C.H. Tsai, S.S. Hsu, C.S. Huang, T.Y. Tseng and I.N. Lin	233
Soft laser sputtering of the GaAlAs (100) surface	
L. Vivet, B. Dubreuil, T. Gibert-Legrand and M.F. Barthe	238
Dynamics of silicon plume generated by laser ablation and its chemical reaction	
T. Makimura and K. Murakami	242
Optical spectroscopy of emission from Si-SiO <sub>2</sub> nanoclusters formed by laser ablation	
I.A. Movtchan, W. Marine, R.W. Dreyfus, H.C. Le, M. Sents and M. Autric	251
Magnetic field enhanced growth of carbon cluster ions in the laser ablation plume of graphite	
F. Kokai, Y. Koga and R.B. Heimann	261
Formation of large carbon cluster ions at graphite (HOPG) surfaces by laser irradiation	
H. Togashi, K. Saito, Y. Koga, H. Yamawaki, K. Aoki, M. Mukaida and T. Kameyama	267
Particles synthesis in erosive laser plasma in a high pressure atmosphere	
A.G. Gnedovets, E.B. Kul'batskii, I. Smurov and G. Flamant	272
 III. LASER SURFACE MODIFICATION, DESORPTION, ABLATION AND ETCHING	
Laser ablation of metals: the transition from non-thermal processes to thermal evaporation	
T. Götz, M. Bergt, W. Hoheisel, F. Träger and M. Stuke	280
Excimer laser induced surface modifications and matter interaction using double-pulse-technique (DPT)	
H.W. Bergmann	287
Excimer laser-induced hydrodynamical effects and surface modifications on silicon carbide	
G. Nicolas and M. Autric	296
Excimer laser induced thermal evaporation and ablation of silicon carbide	
R. Reitano, P. Baeri and N. Marino	302
Increase of efficiency for the XeCl excimer laser ablation of ceramics	
M. Geiger, W. Becker, T. Rebhan, J. Hutfless and N. Lutz	309
The role of defects in laser induced positive ion emission from ionic crystals	
J.T. Dickinson, J.-J. Shin and S.C. Langford	316
Laser ablation of sodium nitrate: NO desorption following excitation of the $\pi-\pi^*$ band of the nitrate anion	
W.P. Hess, K.A.H. German, R.A. Bradley and M.I. McCarthy	321
Laser-induced emission of neutral atoms and molecules from electron-irradiated NaNO <sub>3</sub>	
J.T. Dickinson, J.J. Shin and S.C. Langford	326
Laser damage of CaF <sub>2</sub> (111) surfaces at 248 nm	
S. Gogoll, E. Stenzel, M. Reichling, H. Johansen and E. Matthias	332
Laser patterning of thin-film electrochemical gas sensors	
A. Lecours, M. Caron, P. Ciureanu, G. Turcotte, D. Ivanov, A. Yelon and J.F. Currie	341
Multiwavelength irradiation effect in fused quartz ablation using vacuum-ultraviolet Raman laser	
K. Sugioka, S. Wada, Y. Ohnuma, A. Nakamura, H. Tashiro and K. Toyoda	347
Laser beam application to thin film transistors	
T. Sameshima	352
Laser induced nitridation of Ga on GaAs surfaces	
M.F. Barthe, C. Perrin, L. Vivet, B. Dubreuil and T. Gibert	359
Low-fluence excimer laser irradiation-induced defect formation in indium-tin oxide films	
T. Szörényi, L.D. Laude, I. Bertóti, Zs. Geretovszky and Z. Kántor	363

Micro-Raman study of UV laser ablation of GaAs and Si substrates C. García, J. Ramos, A.C. Prieto, J. Jiménez, C. Geertsens, J.L. Lacour and P. Mauchien	370
Single shot excimer laser annealing of amorphous silicon for AMLCD P. Boher, J.L. Stehle, M. Stehle and B. Godard	376
Liquid carbon observed with reflection measurements on CVD-diamond under UV pulsed-laser irradiation P. Tosin, W. Lüthy and H.P. Weber	384
Erosion plume dynamics during pulsed laser alloying V. Titov, I. Smurov and M. Ignatiev	387
Excimer laser interaction with dielectric thin films E. Welsch, K. Ettrich, H. Blaschke and N. Kaiser	393
Decomposition mechanisms of thin palladium acetate film with excimer UV radiation J.-Y. Zhang, H. Esrom and I.W. Boyd	399
Single crystal laser patterning for selective $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ growth R. Aguiar, F. Sánchez and M. Varela	405
Laser induced periodic surface structures on iron A. Dauscher, V. Feregotto, P. Cordier and A. Thomy	410
Excimer laser ablation for micro-machining: geometric effects P.E. Dyer, D.M. Karnakis, P.H. Key and P. Monk	415
Optodynamics of laser ablation of graduation lines in chromium thin film on glass S. Kopač, J. Pirš and J. Možina	420
Excimer laser machining for the fabrication of analogous microstructures K. Zimmer, D. Hirsch and F. Bigl	425
Femtosecond-pulse visible laser processing of transparent materials J. Krüger and W. Kautek	430
Picosecond UV-laser ablation of Au and Ni films A. Rosenfeld and E.E.B. Campbell	439
X-ray generation for medical applications from a laser-produced plasma M. Grätz, C. Tillman, I. Mercer and S. Svanberg	443
Photon-induced dry etching of Si(100) in the VUV U. Steller, B. Li, A. Krabbe and N. Schwentner	448
The role of gas-phase in the laser etching of Cu by $\text{CCl}_4$ D. Débarre, A. Aliouchouche, J. Boulmer, B. Bourguignon and J.P. Budin	453
Laser-induced formation of visible light emitting silicon D. Dimova-Malinovska, M. Tzolov, N. Malinowski, Ts. Marinova and V. Krastev	457
Cleaning of optical surfaces by excimer laser radiation K. Mann, B. Wolff-Rottke and F. Müller	463
In situ surface cleaning of pure and implanted tungsten photocathodes by pulsed laser irradiation M. Afif, J.P. Girardeau-Montaut, C. Tomas, M. Romand, M. Charbonnier, N.S. Prakash, A. Perez, G. Marest and J.M. Frigerio	469
Laser cleaning in art restoration I. Gobernado-Mitre, J. Medina, B. Calvo, A.C. Prieto, L.A. Leal, B. Pérez, F. Marcos and A.M. de Frutos	474
Cleaning of copper traces on circuit boards with excimer laser radiation D.A. Wesner, M. Mertin, F. Lupp and E.W. Kreutz	479
Modelling and diagnostic of pulsed laser cleaning of oxidized metallic surfaces R. Oltra, O. Yavaş, F. Cruz, J.P. Boquillon and C. Sartori	484
Fast etching of sapphire by a visible range quasi-cw laser radiation S.I. Dolgaev, A.A. Lyalin, A.V. Simakin and G.A. Shafeev	491

CCl <sub>4</sub> -assisted CF <sub>4</sub> etching of silicon in a microwave-assisted LDE (laser dry etching)-process W. Pfleging, D.A. Wesner and E.W. Kreutz	496
XeCl laser ablation of thin film ZnS W.M. Cranton, P.H. Key, D. Sands, C.B. Thomas and F.X. Wagner	501
Surface temperature measurements during pulsed laser action on metallic and ceramic materials M.B. Ignatiev, I.Yu. Smurov, G. Flamant and V.N. Senchenko	505
Optimisation of laser wavelength in the ablation sampling of glass materials S. Shuttleworth	513
Ablation from metals induced by visible and UV laser irradiation W. Svendsen, J. Schou, B. Thstrup and O. Ellegaard	518
Real-time determination of the amount of removed material during short pulses laser micromachining C. Stauter, J. Fontaine and Th. Engel	522
White synchrotron X-radiation-section topography of high energy density ns-pulsed (Nd:YAG) ablation damage in Si(100) wafers J.D. Stephenson	528
Industrial excimer laser beam properties T.A. Watson and C. Rowan	532
IV. ABLATION OF ORGANIC COMPOUNDS AND BIOMATERIALS, POLYMER FILM DEPOSITION	
Excimer laser ablation of polymers and glasses for grating fabrication P.E. Dyer, R.J. Farley, R. Giedl and D.M. Karnakis	537
Chemical surface modification of fluorocarbon polymers by excimer laser processing H. Niino and A. Yabe	550
Excimer laser-induced surface modifications of biocompatible polymer blends P. Viville, S. Beauvois, G. Lambin, R. Lazzaroni, J.L. Brédas, K. Kolev and L. Laude	558
VUV ablation of polymers by emission from gas-puff Z-pinch plasmas H. Deno, S. Sugiyama, Y. Kakudate, M. Yoshida and S. Fujiwara	563
Laser implantation of fluorescent molecules into polymer films H. Fukumura, Y. Kohji and H. Masuhara	569
Surface chemical reaction of polymer film with reactive intermediates produced by laser ablation of azido compound H. Niino and A. Yabe	572
Excited state relaxation processes of MALDI-matrices studied by luminescence spectroscopy H. Ehring and B.U.R. Sundqvist	577
Mapping of molecular C <sub>17</sub> indandione-1,3 pyridinium betaine adsorbates on fused silica by surface second harmonic generation D. Ding, T. Käämbre, S. Ljungström, Y. Chen, K. Siegbahn, E. Wistus, P. Swensson and E. Mukhtar	581
Etching and functionalization of a fluorocarbon polymer by UV laser treatment C. Girardeaux, Y. Idrissi, J.J. Pireaux and R. Caudano	586
Optodynamic studies of Er:YAG laser induced microexplosions in dentin L. Grad and J. Možina	591
Excimer laser ablation of low and high absorption index polymers P.E. Dyer, D.M. Karnakis, P.H. Key and J.P. Tait	596
Single pulse threshold and transmission behaviour of a triazeno-polymer during pulsed UV-laser irradiation T. Lippert, L.S. Bennett, T. Nakamura, H. Niino and A. Yabe	601
High sensitivity quadrupole mass spectrometry of neutrals sputtered by UV-laser ablation of polymers S. Lazare, W. Guan and D. Drilhole	605
Formation of the surface structure of polyethylene-terephthalate (PET) due to ArF excimer laser ablation B. Hopp, M. Csete, K. Révész, J. Vinkó and Zs. Bor	611

Pulsed laser ablation and deposition of fluorocarbon polymers M.G. Norton, W. Jiang, J.T. Dickinson and K.W. Hipps	617
Deposition of fluoropolymer thin films containing semiconductor microcrystallites by VUV laser ablation T. Fujii, S. Inoue and F. Kannari	621
Electrical and optical characteristics of organic thin films fabricated by laser ablation T. Fujii, H. Shima, N. Matsumoto and F. Kannari	625
 V. PULSED LASER DEPOSITION OF OXIDES, CERAMICS, SEMICONDUCTORS AND METALS	
Thin film growth by the pulsed laser assisted deposition technique C. Belouet	630
Scale-up of pulsed laser deposition (PLD) for 4" wafer coating M. Panzner, R. Dietsch, Th. Holz, H. Mai and S. Völlmar	643
Ultrathin film deposition by pulsed laser ablation using crossed beams A.A. Gorbunov, W. Pompe, A. Sewing, S.V. Gaponov, A.D. Akhsakhalyan, I.G. Zabrodin, I.A. Kas'kov, E.B. Klyenkov, A.P. Morozov, N.N. Salaschenko, R. Dietsch, H. Mai and S. Völlmar	649
Off-axis excimer laser deposition of Ta <sub>2</sub> O <sub>5</sub> thin films N. Inoue, S. Kashiwabara, S. Toshima and R. Fujimoto	656
Selection of kinetic energy of laser ablated particles K. Kuba and T. Sugihara	659
Aspects of particulate production from metals exposed to pulsed laser radiation I. Weaver and C.L.S. Lewis	663
Classification of particulates on pulsed-laser deposited Y-Ba-Cu-O films S. Proyer, E. Stangl, M. Borz and D. Bäuerle	668
Formation of artificially-layered high-temperature superconductors using pulsed-laser deposition D.P. Norton, B.C. Chakoumakos, D.H. Lowndes and J.D. Budai	672
Stoichiometric transfer of complex oxides by pulsed laser deposition B. Dam, J.H. Rector, J. Johansson, S. Kars and R. Griessen	679
Improved properties of Pulsed Laser Deposited YBaCuO on NdGaO <sub>3</sub> using CeO <sub>2</sub> template layers D.H.A. Blank, A.J.H.M. Rijnders, F.J.G. Roesthuis, G. den Ouden and H. Rogalla	685
Giant laser-induced voltages at room temperature in Pr doped Y-Ba-Cu-O thin films H.-U. Habermeyer, N. Jisrawi and G. Jäger-Waldau	689
The importance of gas scattering processes on the stoichiometry deviations of laser deposited films J. Gonzalo, C.N. Afonso, J. Perrière and R. Gómez San Roman	693
Laser ablation of oxides: study of the oxygen incorporation by <sup>18</sup> O isotopic tracing techniques R. Pérez Casero, R. Gómez San Román, C. Maréchal, J.P. Enard and J. Perrière	697
Critical thickness of YBaCuO (123) strained thin films and superlattices grown by pulsed laser deposition A. Abert, J.P. Contour, A. Défossé, D. Ravelosona, W. Schwegle and P. Ziemann	703
Laser deposition of YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> films on MgO(100) at 100 mm target-substrate distance and oxygen pressures below 0.1 mbar F. Goerke, A. Thorns and U. Merkt	708
Anisotropic resistivity in pulsed-laser deposited Bi <sub>2</sub> Sr <sub>2</sub> CaCu <sub>2</sub> O <sub>8+δ</sub> films S.T. Li, A. Ritzer, S. Proyer, E. Stangl, D. Bäuerle and N. Reschauer	713
Substrate size effect at off-axis laser deposition of multicomponent films M.R. Predtechensky, O.M. Tukhto, A.N. Smal' and S.A. Vasil'eva	717
In-situ reflectivity measurements during pulsed-laser deposition of Bi <sub>2</sub> Sr <sub>2</sub> CaCu <sub>2</sub> O <sub>8+δ</sub> A. Ritzer, B. Falkner, S.T. Li and D. Bäuerle	721
Ion-assisted pulsed-laser deposition for the fabrication of Y-Ba-Cu-O multilayer structures using oriented intermediate layers of YSZ and CeO <sub>2</sub> R.P. Reade and R.E. Russo	726

Synthesis of RE-Ba-Sr-Cu-O by pulsed-laser deposition E. Stangl, S. Proyer, B. Hellebrand and D. Bäuerle	731
Mirror-smooth $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ superconducting films deposited by plasma-enhanced pulsed laser deposition technique C.S. Huang, T.Y. Tseng, B.C. Chung, C.H. Tsai, H.F. Cheng and I.N. Lin	735
Reactive laser deposition of high quality YBaCuO and ErBaCuO films D. Berling, A. Del Vecchio, S. Acquaviva, D. Bolmont, G. Leggieri, B. Loegel, M. Luisa De Giorgi, A. Luches, A. Mehdaoui and L. Tapfer	739
Growth, structuring and characterisation of all-oxide thin film devices prepared by pulsed laser deposition J.F.M. Cillessen, R.M. Wolf, J.B. Giesbers, P.W.M. Blom, K.-O. Grosse-Holz and E. Pastoor	744
Deposition of optical coatings by pulsed laser ablation G. Reisse, S. Weissmantel, B. Keiper and U. Broulik	752
Rare-earth doped glass waveguides prepared by pulsed laser deposition C.N. Afonso, J.M. Ballesteros, J. Gonzalo, G.C. Righini and S. Pelli	760
Preparation of $\text{SiO}_2\text{N}_y$ films by reactive KrF laser ablation K. Maruyama, Y. Aoki, M. Matsumoto, Y. Hiroshima and H. Ohta	764
Kinetic energy distributions of ions ejected during laser ablation of lead zirconate titanate and their correlation to deposition of ferroelectric thin films G.C. Tyrrell, T.H. York, L.G. Coccia and I.W. Boyd	769
Epitaxial ferroelectric PZT and BST thin films by pulsed UV laser deposition C. Champeaux, P. Marchet and A. Catherinot	775
Growth and characterization of PLZT films M.J.M. Gomes, E. de Matos Gomes, P.L.Q. Mantas and J.L. Baptista	779
Electrical characterization of semiconducting La doped $\text{SrTiO}_3$ thin films prepared by pulsed laser deposition K.-O. Grosse-Holz, J.F.M. Cillessen and R. Waser	784
Pulsed laser deposition of sillenite films intended for photorefractive damage free waveguides J.E. Alfonso, M.J. Martín, J. Mendiola, K. Polgár and C. Zaldo	791
Pulsed laser deposition of novel materials for thin film solid oxide fuel cell applications: $\text{Ce}_{0.9}\text{Gd}_{0.1}\text{O}_{1.95}$ , $\text{La}_{0.7}\text{Sr}_{0.3}\text{CoO}_y$ and $\text{La}_{0.7}\text{Sr}_{0.3}\text{Co}_{0.2}\text{Fe}_{0.8}\text{O}_y$ L.G. Coccia, G.C. Tyrrell, J.A. Kilner, D. Waller, R.J. Chater and I.W. Boyd	795
Ferrimagnetic thin films prepared by pulsed laser deposition M. Guyot, A. Lisfi, R. Krishnan, M. Porte, P. Rougier and V. Cagan	802
Pulsed laser deposition of high quality ITO thin films F. Hanus, A. Jadin and L.D. Laude	807
Pulsed-laser deposited ZnO for device applications S.L. King, J.G.E. Gardeniers and I.W. Boyd	811
Excimer laser ablating preparation of $\text{Ba}_2\text{NaNb}_5\text{O}_{15}$ thin films on $\text{KTiOPO}_4$ substrate and its guide wave property J.M. Liu, Z.G. Liu, S.N. Zhu, Y.Y. Zhu and N.B. Ming	819
$\text{Pb}_{1-x}\text{Ca}_x\text{TiO}_3$ thin films prepared by laser ablation of ceramic targets M.J. Martín, C. Zaldo and J. Mendiola	823
Characterization of ZnO thin films deposited by laser ablation in reactive atmosphere P. Verardi, M. Dinescu and A. Andrei	827
An experimental study and modeling of the thickness distribution in pulsed laser deposited ferroelectric thin films M. Tyunina, K. Sreenivas, C. Bjormander, J. Wittborn and K.V. Rao	831
Preparation of $\text{TiO}_2$ thin films by pulsed laser deposition for waveguiding applications C. Garapon, C. Champeaux, J. Mugnier, G. Panczer, P. Marchet, A. Catherinot and B. Jacquier	836
Pulsed laser deposition of electroceramic thin films M. Mertin, D. Offenbergh, C.W. An, D.A. Wesner and E.W. Kreutz	842

Excimer laser ablation and film deposition of Ti:sapphire P.E. Dyer, S.R. Jackson, P.H. Key, W.J. Metheringham and M.J.J. Schmidt	849
Pulsed laser deposition of nasicon thin films R. Izquierdo, F. Hanus, Th. Lang, D. Ivanov, M. Meunier, L. Laude, J.F. Currie and A. Yelon	855
Comparative diagnostics of ArF- and KrF-laser generated carbon plumes used for amorphous diamond-like carbon film deposition A.A. Puretzky, D.B. Geohegan, G.E. Jellison Jr. and M.M. McGibbon	859
Laser reactive ablation deposition of silicon carbide films G. Leggieri, A. Luches, M. Martino, A. Perrone, R. Alexandrescu, A. Barborica, E. Gyorgy, I.N. Mihailescu, G. Majni and P. Mengucci	866
Carbon nitride thin films obtained by laser ablation of graphite in a nitrogen plasma M.C. Polo, R. Aguiar, P. Serra, L. Clèries, M. Varela and J. Esteve	870
Structural and optical characteristics of pulsed laser deposited ZnSe epilayers A. Chergui, J.L. Deiss, J.B. Grun, J.L. Loison, M. Robino and R. Beserman	874
Deposition of HgCdTe epitaxial layers on anisotropically etched silicon surfaces by laser evaporation T.Ya. Gorbach, M. Kuźma, E. Sheregii, P.S. Smertenko, S.V. Svechnikov and G. Wisz	881
Pulsed Laser Deposition of permanent magnetic Nd <sub>2</sub> Fe <sub>14</sub> B thin films A.J.M. Geurtsen, J.C.S. Kools, L. de Wit and J.C. Lodder	887
Author index	891
Subject index	902



